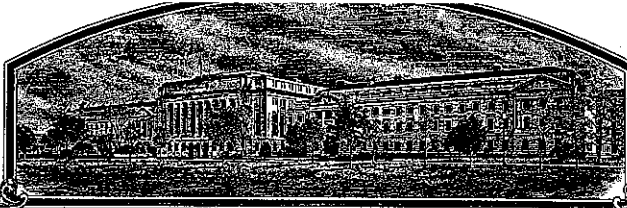


No.

200400240



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Dr. Peter Franck

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED, (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Harvard'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twenty-fourth day of November, in the year two thousand and four.

Attest:



Commissioner

Plant Variety Protection Office
Agricultural Marketing Service

Secretary

Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 55; the Paperwork Reduction Act (PRA) of 1995.

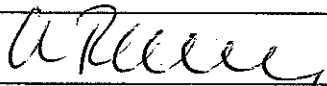

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER Dr. Peter Franck		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME ACS 98036		3. VARIETY NAME Harvard	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) ACS-PZO Pflanzenzucht Oberlimpurg Oberlimpurg 2 D-74523 Schwäbisch Hall Germany		5. TELEPHONE (include area code) ++49-791-93180		FOR OFFICIAL USE ONLY PVPO NUMBER 200400240 FILING DATE June 14, 2004	
		6. FAX (include area code) ++49-791-47333			
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.)		8. IF INCORPORATED, GIVE STATE OF INCORPORATION		9. DATE OF INCORPORATION	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) SEED-LINK INC. P.O. Box 217 208 St. David Street Lindsay, Ontario K9V 5Z4 Canada				FILING AND EXAMINATION FEES: \$ 3657.00 DATE 6/14/04 CERTIFICATION FEE: \$ 432.00 DATE 9/02/2004	
11. TELEPHONE (Include area code) 705-324-0544		12. FAX (Include area code) (705) 324-2550		13. E-MAIL Franck@PZO-Oberlimpurg.de/sloffice@seed-link.c	
14. CROP KIND (Common Name) winter wheat		16. FAMILY NAME (Botanical) POACEAE		18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FC APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PL COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP Triticum aestivum		17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)				20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input checked="" type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input type="checkbox"/> NO (If "no", go to item 21) 21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CER 22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse)	
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)				24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO CANADA Dec. 4, 2003 IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGN REFERENCE NUMBER. (Please use space indicated on reverse.)	

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER 		SIGNATURE OF OWNER 	
NAME (Please print or type) Dr. Peter Franck		NAME (Please print or type) Dr. Peter Franck	
CAPACITY OR TITLE Breeder	DATE May 2, 2004	CAPACITY OR TITLE Breeder	DATE May 2, 2004

(See reverse for instructions and information collection burden statement)

INSTRUCTIONS

200400240

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Complete application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to **reproduce** the variety, or for tuber reproduced varieties verification that a viable (*in the seed it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,600 filing fee and \$3,220 examination fee, payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvpindex.htm>

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that name has been used by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branding, AMS, USDA, 10301 Baltimore Avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 <http://www.ams.usda.gov/lsg/seed.htm>.

ITEM

- 19a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) evidence of uniformity and stability; and (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. A new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
- (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
- (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative declaration after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

22. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

23. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

CANADA: first commercial sales 2002

24. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

Canada: registration number 5542, registration date 12.09.2002, Plant Breeder's Right, Appl. No. 02-3004, Can. # 1671 (Dec. 2003)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or own representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or a modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for review instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**EXHIBIT A ORIGIN AND BREEDING HISTORY OF THE VARIETY**

20.7.2004

Name of applicant : Dr. Peter Franck

Experimental Number : **Harvard (ACS 98036) Hard Red Winter Wheat**

Harvard is a hard red winter wheat variety bred by Dr. Peter Franck. The variety is the result of the following crosses and selections:

Pedigree : PF 626/80 x FHB 8801/78

PF 626/80 = Adam x Hercules

FHB 8801/78 = Karat x line 286

The final cross was made in 1987. Single plant selection was used from F2 to F8 generation. Selection criteria were winter hardiness, milling quality and disease resistance (FHB, brown rust and powdery mildew)

Agronomically acceptable rows were selected; 20 such rows were multiplied. Testing of agronomic values started in F7 generation in Kanada.

Since successive generations were tested in various US-states, mainly Montana.

Stages of Selection and Multiplication

From this 20 rows 4 lines were finally selected and bulked.

Harvard will be maintained at Oberlimpurg throughout the duration of Plant Variety Protection, based on 800 single plant progenies sown annually as „ear to row“. Negative selection is based on obvious criteria in all stages from 4-leaf-stage to harvest. Breeders seed production is generated from this material.

Uniformity and Stability Statement

Harvard has been observed for 4 generations of increase and is stable and uniform. Variants appear in Harvard at a frequency of about 5 in 10000, these off-types have slightly longer awnlets.

3

**"Harvard (ACS 98036)"**

20.7.2004

Hard Red Winter Wheat**Exhibit B Statement of Distinctness**

Harvard is most similar to the variety CDC Falcon; however Harvard differs from plant height (89 cm vs. 86,5 cm) and ear emergence (Harvard is two days earlier than CDC Falcon). Harvard is apically awnletted where CDC Falcon is awned. The glume shoulders of Harvard are square where the glume shoulders of CDC Falcon are wanting. Harvard has better quality results than CDC Falcon (see table 1).

Table 1. Quality characteristics of Harvard compared to check variety CDC Falcon in Western Plant Breeders (Bozeman and Moses Lake) trials 2002-2003 (avg. of 2 locations)

Entry	Heading Date Julian Days	Plt. Ht. (cm)	T.W. (lbs/bu)	Protein %	SED (mm)
CDC Falcon ML, WA 2003			63,9	13,1	108
CDC Falcon BZ, MT 2003	170	84	61,5	12,0	84
CDC Falcon BZ, MT 2002	175	89	61,8	12,3	109
AVG	172,5	86,5	62,4	12,5	100
Harvard ML, WA 2003			64,4	15,0	113
Harvard BZ, MT 2003	169	81	62,7	13,9	107
Harvard BZ, MT 2002	172	97	64,1	13,7	113
AVG	170,5	89,0	63,7	14,2	111

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 2.5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completed and reviewing the collection of information.

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705**

Exhibit C

OBJECTIVE DESCRIPTION OF VARIETY**Wheat (*Triticum* spp.)**

NAME OF APPLICANT (S) DR. PETER FRANCK	TEMPORARY OR EXPERIMENTAL DESIGNATION ACS 98036	VARIETY NAME Harvard
ADDRESS (Street and No. or RD No., City, State, Zip Code and Country) ACS-PZO Pflanzenzucht Oberlimpurg Oberlimpurg 2 D-74523 Schwabisch Hall GERMANY		FOR OFFICIAL USE ONLY PVPO NUMBER 200400240

PLEASE READ ALL INSTRUCTIONS CAREFULLY:

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. 099 or 099) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: _____. Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:1

- 1 = Common
2 = Durum
3 = Club
4 = Other (Specify) _____

2. VERNALIZATION:2

- 1 = Spring
2 = Winter
3 = Other (Specify) _____

3. COLEOPTILE ANTHOCYANIN:1

- 1 = Absent 2 = Present

4. JUVENILE PLANT GROWTH:2

- 1 = Prostrate 2 = Semi-Erect 3 = Erect

5. PLANT COLOR: (boot stage)2

- 1 = Yellow-Green
2 = Green
3 = Blue-Green

6. FLAG LEAF: (boot stage)2

- 1 = Erect 2 = Recurved
1 = Not Twisted 2 = Twisted
3 = Wax Absent 3 = Wax Present

7. EAR EMERGENCE: Days from January 1

1	7	1
0	2	

Number of Days (average)

Number of Days Earlier Than

Same as

Number of Days Later Than

* CDC Falcon

*

*

*Relative to a Commercial Variety Grown in the Same Trial

8. ANTHOR COLOR:1

- 1 = Yellow 2 = Purple

5

9. PLANT HEIGHT: (from soil to top of head, excluding awns)

200400240

0	8	9	cm (Average)
	2-3		cm Taller Than
			Same as
			cm Shorter Than

* CDC Falcon

*

*

*Relative to a Commercial Variety Grown in the Same Trial

10. STEM:

A. ANTHOCYANIN

1	1 = Absent	2 = Present
---	------------	-------------

D. INTERNODE

1	1 = Hollow	2 = Semi-Solid	3 = Solid
	Number of Nodes		

B. WAXY BLOOM

2	1 = Absent	2 = Present
---	------------	-------------

E. PEDUNCLE

1	1 = Erect	2 = Recurved	3 = Semi-Erect
1	4	cm Length	

C. HAIRINESS (last internode of rachis)

1	1 = Absent	2 = Present
---	------------	-------------

F. AURICLE

1	Anthocyanin:	1 = Absent	2 = Present
2	Hair:	1 = Absent	2 = Present

11. HEAD: (at maturity)

A. DENSITY

1	1 = Lax
	2 = Mid-dense (Laxidense)
	3 = Dense

C. CURVATURE

1	1 = Erect
	2 = Inclined
	3 = Recurved

B. SHAPE

1	1 = Tapering
	2 = Strap
	3 = Clavate
	4 = Other (Specify) _____

D. AWNEDNESS

2	1 = Awnless
	2 = Apically Awnletted
	3 = Awnletted
	4 = Awned

12. GLUMES: (at maturity)

A. COLOR

1	1 = White
	2 = Tan
	3 = Other (Specify) _____

E. BEAK WIDTH

2	1 = Narrow
	2 = Medium
	3 = Wide

B. SHOULDER

4	1 = Wanting	2 = Oblique
	3 = Rounded	4 = Square
	5 = Elevated	6 = Apiculate
	7 = Other (Specify) _____	

F. GLUME LENGTH

2	1 = Short (ca. 7mm)
	2 = Medium (ca. 8mm)
	3 = Long (ca. 9mm)

C. SHOULDER WIDTH

2	1 = Narrow
	2 = Medium
	3 = Wide

G. WIDTH

2	1 = Narrow (ca. 3mm)
	2 = Medium (ca. 3.5mm)
	3 = Long (ca. 4mm)

D. BEAK

2	1 = Obtuse
	2 = Acute
	3 = Acuminate

13. SEED

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A. SHAPE

- ☐ 1 1 = Ovate
☐ 2 = Oval
☐ 3 = Elliptical

E. COLOR

- ☐ 3 1 = White
☐ 2 = Amber
☐ 3 = Red
☐ 4 = Other (Specify) _____

B. CHEEK

- ☐ 1 1 = Rounded
☐ 2 = Angular

F. TEXTURE

- ☐ 1 1 = Hard
☐ 2 = Soft
☐ 3 = Other (Specify) _____

C. BRUSH

- ☐ 2 1 = Narrow ☐ 1 = Not Collared
☐ 2 = Medium 2 = Collared
☐ 3 = Wide

G. PHENOL REACTION

- ☐ 4 1 = Ivory 4 = Dark Brown
☐ 2 = Fawn 5 = Black
☐ 3 = Light Brown

D. CREASE

- ☐ 2 1 = Width 60% or less of Kernel
☐ 2 = Width 80% or less of Kernel
☐ 3 = Width nearly as Wide as Kernel

H. SEED WEIGHT

- ☐ 4 ☐ 2 g/1000 Seed (whole number only)

- ☐ 2 1 = Depth 20% or less of Kernel
☐ 2 = Depth 35% or less of Kernel
☐ 3 = Depth 50% or less of Kernel

I. GERM SIZE

- ☐ 2 1 = Small
☐ 2 = Mid-Size
☐ 3 = Large

14. DISEASE (0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)
 PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

<input type="checkbox"/> 0 Stem Rust (<i>Puccinia graminis f. sp. tritici</i>)	<input type="checkbox"/> 3 Leaf Rust (<i>Puccinia recondita f. sp. tritici</i>)
<input type="checkbox"/> 3 Stripe Rust (<i>Puccinia striiformis</i>)	<input type="checkbox"/> 0 Loose Smut (<i>Ustilago tritici</i>)
<input type="checkbox"/> 0 Tan Spot (<i>Pyrenophora tritici-repentis</i>)	<input type="checkbox"/> 0 Flag Smut (<i>Urocystis agropyri</i>)
<input type="checkbox"/> 0 Halo Spot (<i>Selenophoma donacis</i>)	<input type="checkbox"/> 0 Common Bunt (<i>Tilletia tritici</i> or <i>T. Laevis</i>)
<input type="checkbox"/> 3 <i>Septoria nodorum</i> (Glume Blotch)	<input type="checkbox"/> 0 Dwarf Bunt (<i>Tilletia controversa</i>)
<input type="checkbox"/> 0 <i>Septoria avenae</i> (Speckled Leaf Disease)	<input type="checkbox"/> 0 Karnal Bunt (<i>Tilletia indica</i>)
<input type="checkbox"/> 3 <i>Septoria tritici</i> (Speckled Leaf Blotch)	<input type="checkbox"/> 3 Powdery Mildew (<i>Erysiphe graminis f. sp. tritici</i>)
<input type="checkbox"/> 3 Scab (<i>Fusarium spp.</i>)	<input type="checkbox"/> 0 "Snow Molds"
<input type="checkbox"/> 0 "Black Point" (Kernel Smudge)	<input type="checkbox"/> 0 Common Root Rot (<i>Fusarium</i> , <i>Cochliobolus</i> and <i>Bipolaris spp.</i>)
<input type="checkbox"/> 0 Barley Yellow Dwarf Virus (BYDV)	<input type="checkbox"/> 0 Rhizoctonia Root Rot (<i>Rhizoctonia solani</i>)
<input type="checkbox"/> 0 Soilborne Mosaic Virus (SBMV)	<input type="checkbox"/> 0 Black Chaff (<i>Xanthomonas campestris pv. translucens</i>)
<input type="checkbox"/> 0 Wheat Yellow (Spindle Streak) Mosaic Virus	<input type="checkbox"/> 0 Bacterial Leaf Blight (<i>Pseudomonas syringae pv. syringae</i>)
<input type="checkbox"/> 0 Wheat Streak Mosaic Virus (WSMV)	<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> Other (Specify) _____	<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> Other (Specify) _____	<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> Other (Specify) _____	<input type="checkbox"/> Other (Specify) _____

15. INSECT

(0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)
 PLEASE SPECIFY BIOTYPE (where needed)

<input type="checkbox"/> 0 Hessian Fly (<i>Mayetiola destructor</i>)	<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> 0 Stern Sawfly (<i>Cephus spp.</i>)	<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> 0 Cereal Leaf Beetle (<i>Oulema melanopa</i>)	<input type="checkbox"/> Other (Specify) _____

15. INSECT (continued)

(0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

200400240

0
0
0

Russian Aphid (*Diuraphis noxia*)Greenbug (*Schizaphis graminum*)

Aphids

Other (Specify)

Other (Specify)

Other (Specify)

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS:

Harvard Quality Data: Grain Quality Lab, Agriculture Canada, Ottawa

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Flour Characteristics

		Flour Yield	Flour Prt	Prt Diff	Flour Ash	FARINOGRAPH DATA					Loaf Volume	Starch Damage	Agtron Colour
						ABSN	PK TM	Stab	MTI	TMD			
1999													
Karat	chk	83.4	12.02	1.01	0.38	60.5	6.7	6.2	37	68	822	5.41	
Fundulea		75.3	10.92	0.87	0.46	57.3	4.2	3.7	54	112	755	4.22	
Harvard		81.7	11.13	0.88	0.40	57.7	3.0	7.3	20	53	767	5.32	
CWRS (12.5)		76.7	12.04	0.67	0.46	60.7	5.5	6.2	31	73	835	5.61	
2000													
Karat	chk	76.2	10.82	0.74	0.41	57.3	2.0	4.1	39	153	802	4.75	67.0
Fundulea		73.0	10.72	0.96	0.46	56.1	4.0	4.1	61	123	775	4.22	64.0
Harvard		77.6	10.71	0.75	0.43	58.5	2.0	3.8	40	114	790	5.08	63.0
CWRS (12.5)		75.2	12.04	0.67	0.46	60.5	5.9	7.3	29	69	825	5.52	
2 Year													
Karat	chk	76.6	11.60		0.41	58.8	4.4	5.7	37	113	812	4.82	
Fundulea		73.0	11.07		0.43	56.8	4.2	4.1	55	120	763	4.09	
Harvard		77.1	10.92		0.42	58.1	2.5	5.6	30	84	779	5.20	

Kernel Characteristics

CULTIVAR		CGC Grade	Fus Dmg	Test Weight	TKW	Kernel Hard	Grain Protein	Grain Ash	Fall #
1999									
Karat	chk			83.4	36.3	54.9	13.03	1.39	321
Fundulea				82.6	34.1	64.1	11.79	1.39	307
Harvard				83.7	40.3	53.2	12.01	1.38	298
CWRS (12.5)				83.4	31.5	52.3	12.71	1.57	364
2000									
Karat	chk	1	0.82	78.6	32.7	56.6	11.56	1.69	352
Fundulea		1	0.34	79.4	29.1	62.5	11.68	1.62	332
Harvard		2	0.24	80.9	37.2	55.5	11.46	1.54	293
CWRS (12.5)		1	0.1	83.5	31.7	52.3	12.71	1.6	429
2 Year									
Karat	chk			81.1	34.5	56.7	12.22	1.60	328
Fundulea				81.0	31.0	64.0	11.89	1.56	297
Harvard				82.3	38.8	54.4	11.74	1.46	296

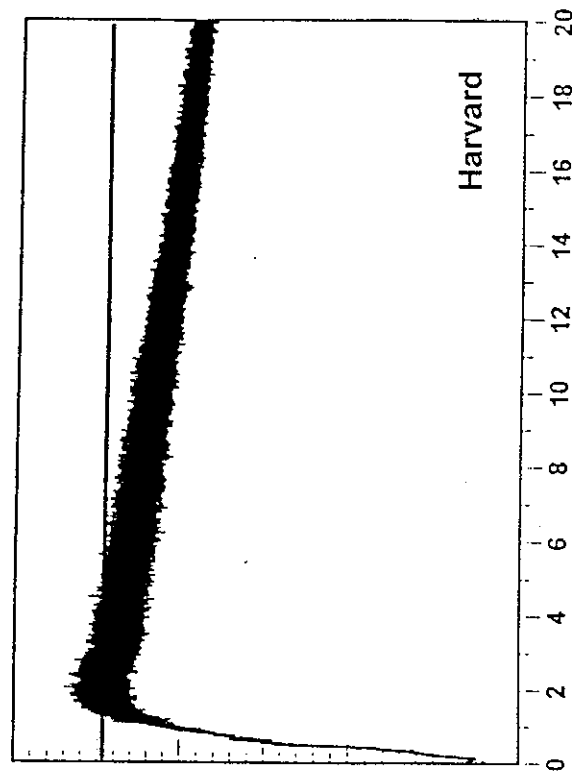
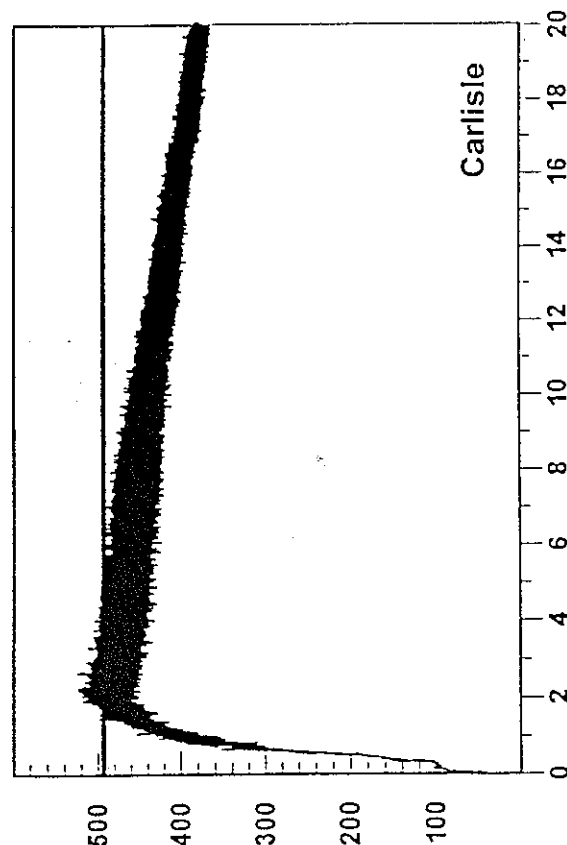
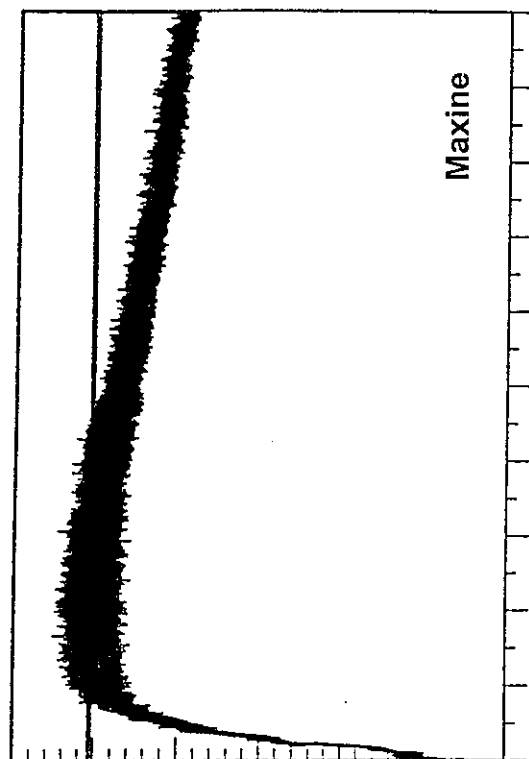
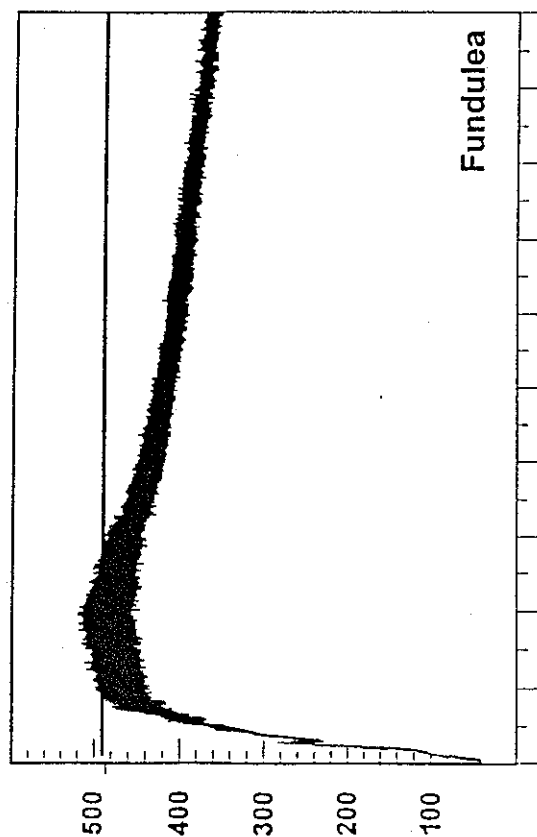
Locations:

1999: Palmerston, Ridgetown, Exeter

2000: Woodstock, Woodslee, Nairn, Palmerston, Chatham, Centralia, Ottawa

Hard Red Winter Wheat

Ontario Hard Red Winter Wheat Registration Test
Results from Grain Quality Lab, ECORC



200400240

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

EXHIBIT E

STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S) Dr. Peter Franck	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER ACS 98036	3. VARIETY NAME Harvard
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) ACS-PZO Pflanzenzucht Oberlimpurg Oberlimpurg 2 D-74523 Schwäbisch Hall Germany	5. TELEPHONE (Include area code) ++49-791-9348-0	6. FAX (Include area code) ++49-791-47333
	7. PVPO NUMBER 200400240	

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain.

☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country.

☐ YES ☒ NO

Germany

10. Is the applicant the original owner?

☒ YES

☐ NO
If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES

☒ NO

If no, give name of country

Germany

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES

☒ NO

If no, give name of country

Germany

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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